(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau

## (43) International Publication Date 18 March 2004 (18.03.2004)



PCT

## 

Rec'd PCT/PTO 0 7 MAR 2005

(10) International Publication Number WO 2004/021843 A1

(51) International Patent Classification<sup>7</sup>:

A47F 1/12

(21) International Application Number:

PCT/GB2003/003840

(22) International Filing Date:

4 September 2003 (04.09.2003)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(30) Priority Data: 0220858.5

7 September 2002 (07.09.2002)

GB

(71) Applicant and

(72) Inventor: GAMBLE, Nigel, Francis [GB/GB]; Hanover Lodge, 256 Seagrave Road, Sileby, Leicestershire LE12 7NJ (GB).

(74) Agent: SMITH, Peter, James; Serjeants, 25 The Crescent, King Street, Leicester LE1 6RX (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

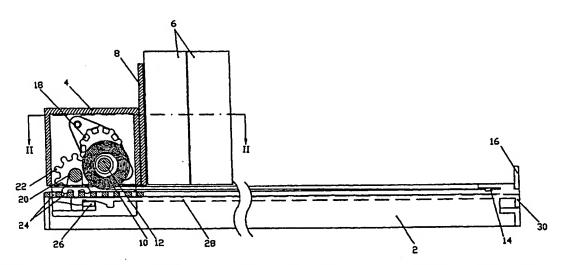
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PUSHER APPARATUS FOR MERCHANDISE



(57) Abstract: A pusher apparatus comprises a track (2, 52), a pusher (4, 54) mounted on the track (2, 52) for movement along the track; a spring (10, 70) mounted on the pusher (4, 54) for urging the pusher along the track (2, 52); an axle (20, 60) rotatably mounted on the pusher (4, 54); and at least one wheel (22,66) fixed to the axle (20, 62) for positively engaging the track (2, 52). In one aspect of the invention, two of the said wheels (22) are fixed to the axle (20) to avoid canting of the pusher (4) as it moves along the track (2). In another aspect of the invention, the spring (70) is a coil spring contained within the pusher unit (54) for driving rotation of the axle (60). Preferably, a rotary damper (18, 62) regulates the operation of the coil spring (10, 70).